

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE
THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re application of:	Warburton)	
)	
Serial No.:	10/668,537)	
)	
Filed:	September 23, 2003)	
)	Art Unit
For:	X-RAY DEVICE COMPONENT WITH)	
	EMISSIVE INORGANIC COATING)	1794
)	
Examiner:	Aaron Austin)	
)	

The Honorable Commissioner of Patents and Trademarks
Washington, D.C. 20231

**REPLY BRIEF OF APPELLANT
PURSUANT TO 37 CFR 41.41**

This Reply Brief is responsive to the Supplemental Examiner's Answer mailed 24 July 2008 ("Supplemental Answer") and is hereby submitted to the Board of Patent Appeals and Interferences (the "Board") pursuant to the provisions of 37 CFR 41.41.

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LIST OF REFERENCES

U.S. Patent Documents

U.S. Patent No. 3,400,882 to *McMamus* (“*McMamus*”)
U.S. Patent No. 6,329,098 to *Bliesner* (“*Bliesner*”)
U.S. Patent No. 5,725,808 to *Tormey et al.* (“*Tormey*”)

I. GROUNDS OF THE REJECTIONS TO BE REVIEWED ON APPEAL

- Issue 1: Whether claims 1-36 are unpatentable under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement.
- Issue 2: Whether claims 1-2, 4-15 and 17-19 are unpatentable under 35 U.S.C. §102(b) as being anticipated by *McMamus*.
- Issue 3: Whether claims 1-2 and 4-10 are unpatentable under 35 U.S.C. §102(b) as being anticipated by *Bliesner*.
- Issue 4: Whether claims 1-2, 4-15 and 17-19 are unpatentable, under 35 U.S.C. §103(a), over *McMamus*.
- Issue 5: Whether claims 1-2 and 4-10 are unpatentable, under 35 U.S.C. §103(a), over *Bliesner*.
- Issue 6: Whether claims 3, 16 and 20-26 are unpatentable, under 35 U.S.C. §103(a), over *McMamus* as applied to claims 1-2, 4-15 and 17-19, and further in view of *Tormey*.
- Issue 7: Whether claim 3 is unpatentable, under 35 U.S.C. §103(a), over *Bliesner* as applied to claims 1-2, and further in view of *Tormey*.

II. REPLY TO EXAMINER ARGUMENTS

Applicant notes at the outset that the remarks, or a lack of remarks, herein are not intended to constitute, and should not be construed as, an acquiescence on the part of the Applicant: as to the purported teachings or prior art status of the cited references; as to the characterization of the cited references advanced by the Examiner; or as to any other assertions, allegations or characterizations made by the Examiner at any time in this case.

A. Issue 1: Whether claims 1-36 are unpatentable under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement.

With regard to the rejection of claims 1-36 under 35 U.S.C. § 112, first paragraph, the Examiner maintains in the Supplemental Examiner's Answer mailed 24 July 2008 that those claims are rejected as failing to comply with the enablement requirement. In connection with that statement, the Examiner has responded to the arguments advanced by the Applicant in the Reply Brief filed 7 May 2007 ("Reply Brief"). Applicant submits that the response of the Examiner lacks merit for at least the reasons set forth below.

1. Lack of adequate factual basis for the rejection

As discussed in further detail below, Applicant notes that the Examiner has made only very limited factual findings on the issue of enablement. Consequently, the enablement rejection is based primarily on conclusory assertions and the personal opinion of the Examiner. In this regard, the examination guidelines are instructive. Particularly, the examination guidelines clearly state that "The examiner should **never** make the determination [as to enablement] based on personal opinion. The determination should always be based on the weight of all evidence." MPEP § 2164.05. Emphasis in original. At least because the rejection lacks an adequate factual underpinning, Applicant respectfully submits that the rejection of claims 1-36 on enablement grounds should be reversed by the Board.

2. No *per se* rule that undue experimentation is required to determine which of "many" compositions is suitable to form the claimed coating

In discussing the *In re Wands* factors, the Examiner has concluded that “Without knowledge of the compositions represented by the trademarks/trade names, one of ordinary skill in the art is not provided with sufficient information to practice the invention as the trademarks/trade names may represent any number of individual products...Therefore, undue experimentation is necessary to determine which of the many known inorganic ceramic coatings are suitable...” *Supplemental Answer* at 2. As a preliminary matter, Applicant notes that the Examiner appears to be taking the position that Applicant is relying solely on trademarks/trade names for enablement, inasmuch as the aforementioned allegations fail to consider Applicant’s disclosure in its entirety. See, e.g., *Supplemental Answer* at 6-11 (discussion of *In re Wands* factors and repeated assertions that ‘trademarks’ and ‘tradenames’ fail to provide adequate support for the claims). As Applicant has repeatedly pointed out (most recently in the *Reply Brief* at 9) however, this is not the case.

With regard to the quantum of experimentation, the Examiner has provided no evidence or discussion, beyond mere assertions, that there are “many known inorganic ceramic compounds...suitable in forming the claimed emissive coating for use as the taught x-ray component.” *Id.* Emphasis added.

Rather, the Examiner has simply assumed the existence of these circumstances. As well, it is implicit in the assertions of the Examiner that the existence of “many” compositions necessarily gives rise to a need for undue experimentation, notwithstanding that the Examiner has failed to provide any discussion or analysis as to what constitutes “many” or as to the manner by which the Examiner determined that “many” inorganic ceramic compositions suitable for use in an x-ray device environment are “known.” Thus, the Examiner has articulated a per se rule with little or no supporting authority, analysis or evidence.

In relation to the foregoing, the Examiner has also alleged that “...a majority of the properties [disclosed in the application] describe properties that may be associated with a large number of inorganic compositions...” *Supplemental Answer* at 11. However, the Examiner has failed to identify which group of properties allegedly constitute the “majority” and the Examiner has failed to establish that the properties in that “majority” are associated with a “large number” of inorganic compositions. These statements by the Examiner are conclusions, not analysis or evidence.

Insofar as the allegations of the Examiner are unsupported by analysis, evidence, or authority, the rejection is not well taken and should accordingly be reversed by the Board.

3. Deficiencies in Examiner analysis of *In re Wands* factors

3.1 limited/no factual findings to support rejection

The Examiner has acknowledged the factual finding of the *In re Wands* court that “...there was ‘a high level of skill in the art at the time the application was filed’...” See *Supplemental Answer* at 4. In the case at bar however, the Examiner has made no factual findings as to the level of skill in the art and few, if any, factual findings regarding the other *In re Wands* factors. Rather, and as discussed below, the Examiner has relied largely on vague and/or conclusory assertions in support of the rejection.

3.2 failure to consider knowledge available to one of skill

The Examiner’s analysis of factors (A), (B), (F), (G) and (H) does not appear to take into account that “...not everything necessary to practice the invention need be disclosed. In fact, what is well-known is best omitted...All that is necessary is that one skilled in the art be able to practice the claimed invention, given the level of knowledge and skill in the art. Further the scope of enablement must only bear a ‘reasonable correlation’ to the scope of the claims.” *MPEP 2164.08*. Emphasis added. In fact, there does not appear to be any evidence in the record that the Examiner has given due consideration to the knowledge, not disclosed in the specification, but available in the prior art to one of ordinary skill, in the enablement analysis. Rather, it appears that the Examiner has improperly confined the analysis solely to what is disclosed within the ‘four corners’ of Applicant’s disclosure.

3.3 breadth of claims

Moreover, while the Examiner has characterized the claims as “extremely broad” (*Supplemental Answer* at 5), Applicant notes that claim scope well beyond what the Applicant has recited is required to support a finding that claim scope exceeds the disclosure. For example, a claim reciting ‘any and all live, non-pathogenic vaccines...which elicit immunoprotective activity in any animal toward any RNA virus...’ (*MPEP 2164.08*. Emphasis in original) was found to be overly broad in view of the associated disclosure. In contrast however, the Applicant’s claims do not include such broad language. Nor has the Examiner shown that the

scope of Applicant's claims, when considered in view of Applicant's disclosure and the knowledge available to one of ordinary skill in the art, is similarly broad.

3.4 working example

With further reference to the Examiner's discussion of factor (G) concerning a working example, Applicant notes that "Compliance with the enablement requirement...does not turn on whether an example is disclosed." *MPEP 2164.02*. Emphasis added. Moreover, while "...lack of a working example, however, is a factor to be considered, especially in a case involving an unpredictable and undeveloped art..." (*Id.*), Applicant notes that Applicant's disclosure includes a working example and, further, the Examiner has advanced no evidence or argument that the claimed invention resides in an unpredictable and undeveloped art.

3.5 quantity of experimentation

With further attention to the Examiner's discussion of factor (H) concerning the quantity of experimentation, Applicant respectfully notes that the Examiner has largely relied on vague assertions that one of ordinary skill in the art would have to engage in undue experimentation to practice the claimed invention. Applicant respectfully submits however that something more is required to support a finding of lack of enablement. In particular, the Examiner has not made any factual findings that would support a conclusion that one of ordinary skill in the specific art to which the claims relate would be required to perform undue experimentation in order to practice the claimed invention. By way of example, the Examiner has not made any factual findings as to what types of experiments might be required, how often those experiments might have to be performed, or as to any other useful evidence upon which an "undue experimentation" analysis could be based. In contrast, in a case where the amount of required experimentation was found to be reasonable, the court found that an expenditure of \$50K and 6-12 months of experimentation was not "undue." See *MPEP 2164.06(II)* (citing *United States v. Telectronics, Inc.*, 857 F.2d 778, USPQ2d 1217 (Fed. Cir. 1988)).

3.6 "considerable experimentation" is permissible

Moreover, Applicant notes that the heavy reliance of the Examiner on the purported existence of "many" possible compounds, as a basis for making a conclusion that undue experimentation is required, is not well taken. In fact, "The test is not merely quantitative, since a considerable amount of experimentation is permissible, if it is merely routine..." *In re Wands*,

858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988)(citing *In re Angstadt*, 537 F.2d 489, 502-04, 190 USPQ 214, 217-219 (CCPA 1976). See also, MPEP 2164.06. Here, the Examiner has advanced no evidence or argument that something beyond routine experimentation would be required by one of ordinary skill in the art to practice the claimed invention.

3.7 level of skill in the art

Regarding factor (D) concerning the level of ordinary skill in the art, the Examiner relies on little more than conclusory statements in finding that this factor weighs against enablement. For example, the Examiner has alleged “...the level of ordinary skill in the art...is not such that one can determine which ceramics qualify as ‘emissive coatings’ without further explanation provided by the appellant and/or undue experimentation...” and “...it is beyond the skill of one of ordinary skill in the art to determine the identity of suitable ceramics from the disclosure without undue experimentation...” *Supplemental Answer* at 7. Applicant respectfully submits however that these are merely conclusions, not analysis or evidence. Moreover, it seems clear that the Examiner has, again, failed to take account of the knowledge in the prior art that is available to one of ordinary skill and has instead improperly confined the analysis to Applicant’s disclosure. Nor has the Examiner provided any evidence of what one of ordinary skill in the art could be expected to know (see also II.2.1 above). Thus, the Examiner has provided no ‘yardstick’ against which the sufficiency of Applicant’s disclosure can be considered and evaluated.

3.8 predictability

As to this *In re Wands* factor, the Examiner has alleged that “...there is no known method for determining which ceramics are ‘emissive’ without undue experimentation...” *Supplemental Answer* at 7. Emphasis added. However, the Examiner has not produced any evidence whatsoever in support of this sweeping assertion. That is, this assertion is nothing more than a conclusion, unsupported by factual findings.

4. Deficiency in Examiner analysis of state of the art and scope of disclosure

In responding to Applicant’s arguments on this issue, the Examiner has asserted that “Nothing in the prior art of record or the specification provides to one of ordinary skill in the art with the knowledge of which inorganically bonded ceramics of the many known inorganic ceramics may be implemented to form the claimed emissive coatings.” *Supplemental Answer* at

10. This assertion however directly contradicts the repeated allegations of the Examiner that the claims are anticipated and/or obvious in view of various cited references. See, e.g., the Office Action mailed 13 Mar 06 at 3-4, and *Reply Brief* at 6.

5. no requirement for recitation of all elements in claims

In connection with the *In re Wands* analysis, the Examiner has alleged that "...the listed properties provided by appellant to support this argument are not in the claims...That is to say, the claims do not provide for the physical properties set forth in...the specification at pages 8 and 17..." However, the Examiner has cited no authority for the notion that for a claim to be enabled, that claim must recite all of the elements disclosed in the specification.

6. conclusion

For at least the reasons set forth above, Applicant submits that the rejection of claims 1-36 as purportedly failing to comply with the enablement requirement is not well taken and should be reversed by the Board.

B. Issue 2: Whether claims 1-2, 4-15 and 17-19 are unpatentable under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,400,882 to McManus

In response to Applicant's arguments that the Examiner has failed to establish anticipation of claims 7-10 and 18-19 by *McManus*, the Examiner has alleged that "...it would have been obvious to...adjust the claimed parameters for the intended application, since it has been held that discovering an optimum value of a result effective variable involves only routine skill..." *Supplemental Answer* at 15.

Applicant notes however that the Examiner's rationale assumes that adjusting the emissivity and/or effective operating temperatures of the *McManus* coating is a matter of routine experimentation for achieving optimal performance. However, the MPEP states that: "A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation." MPEP § 2144.05.II.B (emphasis added). Here, the Examiner has not shown that performance characteristics of the *McManus* coating depends on or relates to emissivity and/or effective operating temperature or that such was recognized in the prior art. Moreover, the fact that *McManus* purports to disclose the best

mode known to the named inventors but has not been established as disclosing the claimed emissivities or effective operating temperatures strongly indicates that claimed emissivities and lack of corrosion/oxidation at about 1450F were not recognized as result-effective variables.

In light of the foregoing, Applicant respectfully submits that the Examiner has failed to establish a *prima facie* case of obviousness with respect to the claims, at least because the Examiner has failed to show that the reference teaches or suggests all the limitations of the claims, and Applicant accordingly submits that the rejection of claims 7-10 and 18-19 should be reversed by the Board.

C. Issue 4: Whether claims 1-2, 4-15 and 17-19 are unpatentable, under 35 U.S.C. §103(a), over *McManus*.

As discussed at II.B above, the Examiner has not established that the particular emissivities (claims 7 and 8) and/or temperature-related oxidation effects (claims 9-10 and 18-19) are disclosed, or inherently present, in *McManus*.

For the foregoing reason, among others, Applicant respectfully submits that the Examiner has failed to establish a *prima facie* case of obviousness with respect to claims 7-10 and 18-19, at least because the Examiner has failed to show that *McManus* teaches or suggests all the limitations of the claims, and Applicant accordingly submits that the rejection of claims 7-10 and 18-19 should be reversed by the Board.

D. Issue 5: Whether claims 1-2 and 4-10 are unpatentable, under 35 U.S.C. §103(a), over *Bliesner*.

As discussed at II.B above, the Examiner has not established that the particular emissivities (claims 7 and 8) and/or temperature-related oxidation effects (claims 9-10) are disclosed, or inherently present, in *Bliesner*.

For the foregoing reason, among others, Applicant respectfully submits that the Examiner has failed to establish a *prima facie* case of obviousness with respect to claims 7-10, at least because the Examiner has failed to show that *Bliesner* teaches or suggests all the limitations of the claims, and Applicant accordingly submits that the rejection of claims 7-10 should be reversed by the Board.

E. Issue 6: Whether claims 3, 16 and 20-26 are unpatentable, under 35 U.S.C. §103(a), over *McManus* as applied to claims 1-2, 4-15 and 17-19, and further in view of *Tormey*.

In response to Applicant's arguments on the non-analogous relation between *McManus* and *Tormey* (see *Reply Brief* at 18-19), the Examiner has stated that "It is the Examiner's opinion that such control of size and TCE is desirable in the maintaining the size and shape of the ceramic of *McManus*..." *Supplemental Answer* at 17. Emphasis added. With respect, Applicant submits that the opinion of the Examiner is irrelevant. What is relevant, however, is what the references teach or suggest to one of ordinary skill in the art and whether one of skill in the art would look to a combination of reference teachings to arrive at the claimed invention. As noted in the *Reply Brief* (at 18-19) however, the Examiner has not shown that one of ordinary skill in the art would, or could, combine the purported reference teachings to arrive at the claimed invention.

As to the allegation of the Examiner that it would be obvious to try to combine *Tormey* and *McManus* because "benefits" will result from the use of like materials in a like manner (*Supplemental Answer* at 18), Applicant notes that the Examiner has failed to establish how or why the purported "benefits" would be useful or desirable in the context of the *McManus* device.

For the foregoing reasons, among others, Applicant respectfully submits that the Examiner has failed to establish a *prima facie* case of obviousness with respect to claims 3, 16 and 20-26, at least because the Examiner has failed to show that *Bliesner* teaches or suggests all the limitations of the claims, and Applicant accordingly submits that the rejection of claims 3, 16 and 20-26 should be reversed by the Board.

F. Issue 7: Whether claim 3 is unpatentable, under 35 U.S.C. §103(a), over *Bliesner* as applied to claims 1-2, and further in view of *Tormey*.

In response to Applicant's arguments on the non-analogous relation between *Bliesner* and *Tormey* (see *Reply Brief* at 23-25), the Examiner has stated that "It is the Examiner's opinion that such control of size and TCE is desirable in the maintaining the size and shape of the ceramic of *Bliesner*..." *Supplemental Answer* at 19. Emphasis added. With respect, Applicant

submits that the opinion of the Examiner is irrelevant. What is relevant, however, is what the references teach or suggest to one of ordinary skill in the art and whether one of skill in the art would look to a combination of reference teachings to arrive at the claimed invention. As noted in the *Reply Brief* (at 18-19) however, the Examiner has not shown that one of ordinary skill in the art would, or could, combine the purported reference teachings to arrive at the claimed invention.

As to the allegation of the Examiner that it would be obvious to try to combine *Tormey* and *Bliesner* because “benefits” will result from the use of like materials in a like manner (*Supplemental Answer* at 18), Applicant notes that the Examiner has failed to establish how or why the purported “benefits” would be useful or desirable in the context of the *Bliesner* device.

For the foregoing reasons, among others, Applicant respectfully submits that the Examiner has failed to establish a *prima facie* case of obviousness with respect to claims 3, 16 and 20-26, at least because the Examiner has failed to show that *Bliesner* teaches or suggests all the limitations of the claims, and Applicant accordingly submits that the rejection of claims 3, 16 and 20-26 should be reversed by the Board.

III. FORM OF AMENDED BRIEF OF APPELLANT

In the *Supplemental Answer*, the Examiner maintains the allegation that the Appeal Brief is deficient with respect to claim 11 because the claimed coating is an inorganically bonded ceramic, not an inorganically bonded composite. *Supplemental Answer* at 20. Applicant respectfully disagrees but submits that in view of the Second Amended Brief of Appellant submitted herewith, the objection should be withdrawn.

IV. FEE PAYMENT

The Commissioner is hereby authorized to charge payment of any of the following fees that may be applicable to this communication, or credit any overpayment, to Deposit Account No. 23-3178: (1) any filing fees required under 37 CFR § 1.16; and/or (2) any patent application and reexamination processing fees under 37 CFR § 1.17.

CONCLUSION

Based on the foregoing, and in view of the arguments previously advanced in *Appellant's Amended Brief* and *Reply Brief*, Appellant respectfully submits that the rejections of the claims are not well taken. Accordingly, Appellant respectfully requests that the Board reverse the Examiner's rejections of claims 1-36 pending in this application and thereby place this application in condition for immediate allowance.

This Reply Brief is

DATED this the 4th day of September 2008.

Respectfully submitted,

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